

Being self-centred is the key to empathy

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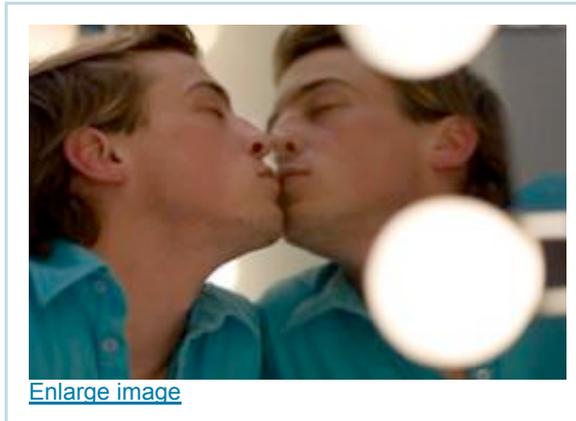
ARE you narcissistic and egotistical? If so, you probably think this feature's about you, don't you? If not, listen up anyway - you may discover that you have been deluding yourself. A slew of psychology experiments is revealing just how shockingly egocentric we all are.

Take this study designed to see how we judge trustworthiness. Lisa DeBruine at the University of Aberdeen in the UK had volunteers play an online game in which they had to decide whether to trust another player to split a sum of money. All they had to go on was a picture. Volunteers were shown photos of students at another university, and also saw photos that DeBruine had manipulated electronically to incorporate aspects of the volunteers' own faces. The manipulations were subtle enough for the volunteers not to notice them but the effect was remarkable nevertheless, with players far more likely to trust the faces that incorporated aspects of their own (*Proceedings of the Royal Society B*, vol 269, p 1307). And if that doesn't strike you as self-love, consider this: another study found that people are sexually attracted to images of themselves morphed to look like someone of the opposite sex (*Current Psychology*, vol 18, p 104).

Such findings have persuaded some psychologists that people are more egocentric than was once thought. We may not while away days gazing adoringly at ourselves, as Greek hunk Narcissus did, but we do often view the world through the prism of our own reflection. Far from being morally reprehensible, however, these egocentric tendencies may provide a foundation for empathy and an efficient way to navigate our complex social lives. But before you pat yourself on the back and admire yourself in the mirror, a word of caution: egocentrism can create problems when we project our own feelings and motivations onto people with whom we identify, leading to the mistaken belief that others understand our intentions.

Egocentrism seems to be a natural part of being human. Nevertheless, the renowned 20th-century developmental psychologist Jean Piaget argued that although children are inherently egocentric, most people outgrow these tendencies. Today, such thinking is reflected in the idea that during childhood we develop a "theory of mind" that allows us to infer the mental states of others, independent of our own. However, emerging evidence suggests that it cannot be as simple as that. Despite shedding much of their childhood egocentrism, adults still make use of the self-first approach, at least some of the time. The question is: when?

Nick Epley at the University of Chicago, has been trying to find out. In an experiment dubbed "Cola Wars", he conducted a taste test with a twist: he told participants which cola was Coke and

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which was Pepsi before tasting began. After tasting, all they had to do was estimate what percentage of their friends would be able to distinguish between the two in a blind taste test. Studies show that people's ability to do this is no better than chance - so an answer around 50 per cent would be right. What Epley found was intriguing. When he motivated volunteers to give a considered response - by offering them a cash payment - their answers tended to be close to 50 per cent. Subjects who were not paid, however, seemed to answer with an egocentric bias: since they knew which cola was which, they assumed that a high proportion of their friends would guess correctly (*Journal of Personality and Social Psychology*, vol 87, p 327).

For Epley, the finding supports his idea that putting yourself inside the head of another person and considering their perspective requires a cognitive effort that simple egocentric judgements do not. So even though adults have acquired a theory of mind, he says, we automatically use ourselves as a guide to help us judge the mental states of others. However, while such egocentric judgements are fast and easy, they are also prone to be incorrect, so the more information we get, the more likely we are to use additional strategies to adjust or correct our initial judgements.

Ego anchor

Daniel Ames at Columbia Business School in New York City agrees that egocentric thinking tends to be confined to first impressions. "When we judge others' behaviours, attitudes, values and beliefs, we anchor on ourselves and extrapolate - we assume other people like what we like, want what we want and believe what we believe," he says. "It's a habitual source of our inferences." However, he points out, it is not the only strategy we use for rapid judgements. Another common approach is to fall back on stereotypes - redheads are fiery, farmers are conservative, people who wear glasses are intelligent, and so on.

So with more than one strategy to choose from, what triggers egocentric thinking? "One of the things that tip the scales is perceived similarity," Ames says, even if that similarity is entirely arbitrary. His experiments show that volunteers who believed they shared television and musical tastes with a fictional character named Alice were more likely to project their own motivations onto her when asked why she might help a professor whose bicycle was broken (*Journal of Personality and Social Psychology*, vol 87, p 340).

The idea that if we identify with someone, we will assume they have similar motivations and desires is bolstered by the research of Jason Mitchell at Harvard University. His studies use virtual characters, some described as typical college students from the north-eastern US with very liberal attitudes, while others are described as conservative, republican, fundamental Christians attending state colleges in the Midwest. Volunteers are introduced to both types of character and then asked questions about what these people might like or dislike. They also answered the same questions for themselves in which they might say, for example, how frustrated they get sitting in traffic, or that they enjoy grocery shopping but hate doing laundry. "People are more likely to say that the similar others share their own attitude," says Mitchell. In the north-eastern US, where his lab is located, people tend to identify with the liberal virtual character. "So if you really hate doing laundry, you're also likely to say that the person who is a liberal also hates laundry."

Mitchell went a step further, however, and used an fMRI scanner to see what was happening in the brains of his volunteers when they participated in this experiment. A specific region of interest is the ventral medial prefrontal cortex - an area within the medial prefrontal region that appears to be involved in social thought. This is the area that becomes active when we think about our own preferences and experiences. "It turns out it's also engaged when thinking about other people's minds," says Mitchell, but with a big caveat: "It's only engaged when you think of the minds of people who are similar to you." By contrast, when his volunteers were thinking about the preferences of people with whom they did not identify, their brain scans instead showed increased activity in the dorsal medial prefrontal cortex. This region is known to be associated with thinking about the thoughts of others, but is not activated when we think about ourselves (*Neuron*, vol 50, p 655).

What would be the benefit of thinking about someone with whom you identify in the same way that you think about yourself? It makes it possible to make useful inferences about what they are thinking or how they might feel in similar situations, says Mitchell. "Other people's minds are our environment," he says. Just as a fish swims in water, we swim in an ocean of beings, each with their own agendas and behaviours. Our successful navigation of these social waters depends on how attentive we are to the mental states of others and on how well we can develop a predictive model of what people are likely to do. "I've never seen anyone's beliefs or their feelings or desires

or goals. I don't have any direct access to what you're thinking or feeling right now," says Mitchell. "But I am able to introspect."

If this mental mechanism kicks in when we assess that someone is similar to ourselves, it would go some way to explaining why DeBruine's volunteers trusted people who looked like them and perhaps even why people are attracted to pictures of themselves morphed into someone of the opposite sex. With nothing more to go on, the volunteers may simply have felt more comfortable interacting with others who subconsciously reminded them of themselves. However, DeBruine points out that there is an additional, potent force at work in these sorts of situations. Kin selection predicts that we tend to favour anyone with a family resemblance - family members share some of our genes, so by helping them we increase the chances of those genes surviving into subsequent generations. "People will be kinder towards others with faces like their own, insofar as facial resemblance can be a proxy for genetic relatedness," says DeBruine. So in cases where egocentric thinking is triggered by physical similarities, it may also serve to reinforce a driving force of evolution - the survival of our genes.

Egocentric thinking is not only helpful for identifying with apparently similar individuals, however. It also colours the way we see the world. In work yet to be published, David Perrett and Janek Lobmaier at the University of St Andrews in the UK showed people a set of faces with a range of expressions, some positive and some negative. Some were looking directly at the camera, others looking slightly to one side. What the volunteers reported seeing, however, was the happy people looking them in the eye and angry or frightened people looking away, suggesting that we like to convince ourselves that we are the focus of positive attention. Our distortion of reality gets worse when we really are the focus of attention. One team found that volunteers judged photographed faces to be more good-looking if those faces were looking directly at them (*Psychological Science*, vol 16, p 236). Another study done by DeBruine, Ben Jones and colleagues found that faces looking at the viewer were rated even more highly if they were also smiling (*Proceedings of the Royal Society B*, DOI: [10.1098/rspb.2007.1073](https://doi.org/10.1098/rspb.2007.1073)).

These delusions serve the practical purpose of smoothing our social interactions, says Perrett. Feeling that we are the focus of positive attention helps protect our self-esteem and bolsters our confidence in social settings. It also makes sense that we find people more attractive when they look at us and smile. "Attraction is not only about physical beauty," says Jones. "People are also attracted to individuals who appear to be attracted to them." This helps us to judge how much effort to put into a social encounter, increasing the chance that we allocate mating effort to individuals who are more likely to reciprocate.

So egocentrism is a fast and more-or-less efficient way to negotiate social transactions without having to figure out other people's thinking from scratch every time, but it does have a downside, as the studies of Ames and Mitchell highlight. Just because someone shares your general political views, it doesn't necessarily mean they share your hatred of doing laundry. Similarly, knowing a little about someone's tastes in music and television cannot really give you an insight into their motivation to help someone whose bicycle has broken. Such unthinking assumptions easily lead to misunderstandings and would make for rather rocky relationships if they were all we had to go on.

What's more, there is evidence that we are not always as generous in our assessment of what others are feeling as we are of ourselves. Jean Decety at the University of Chicago showed volunteers images of minor injuries such as a finger being trapped in a door or a foot squashed by a heavy object. When he asked them to rate the level of pain involved, he found that people thought any given injury would be more painful if they imagined it happening to themselves (*Neuropsychologia*, vol 44, p 752).

Despite all this, it looks like we may need to reassess our traditionally negative image of egocentrism. Undoubtedly our thinking can be self-referential, but if it provides an efficient cognitive framework for our social interactions then we probably shouldn't knock it. Egocentric thinking is far from error-proof, but seeing the world as a reflection of ourselves may not be such a bad thing after all.

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Oh, my god

The idea that we use ourselves as a starting point for understanding the world is not new. In

the 6th century BC, the philosopher Xenophanes noted that our egocentrism even extends to making gods in our own image. The ancient Greeks had gods with blonde hair and fair skin, African gods tended to be dark haired and dark skinned and, he quipped, if cows should ever find religion, we could predict with some confidence what their gods would look like.

Nick Epley at the University of Chicago has been exploring the assumptions that believers make about their god. He asked religious volunteers - mostly Christian and Jewish - to give their views on issues such as the death penalty and abortion, and also to say what they thought God believes on the subject. Sure enough, people tended to assume that the beliefs of their God tallied with their own. What's surprising, though, is Epley's discovery of how easily we shift our perceptions of God to fit our own beliefs.

By simply asking people to either actively or passively express their own beliefs, he was able to manipulate the strength of their convictions. Some volunteers had to take the time to actively shade a square box to show their support or opposition for the death penalty, for example, while others simply had to turn a page to reveal their view. The volunteers then rated the strength of their belief on a sliding scale.

Active expression of their personal beliefs led to a stronger rating, whereas the more passive page-turning served to reduce their conviction. Remarkably, Epley found that the volunteers' assessment of the strength of God's convictions changed to match their own manipulated stance. He concludes that we are even more egocentric in our judgements about what our god believes than we are in our judgement of other people's beliefs.

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